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Net-zero energy home being tested

By Rebecca Penty, page B1

Homes that consume only as much energy as they pump out in a year will be the next new trend in housing if a Bathurst businessman has his way.

Axel Lerche, of marketing firm Tight Lines Productions Ltd., has brought together industry firms to build a pre-fabricated net-zero energy home where a local family of six will live for a year, starting in September.

The Bathurst family will document their experience through weekly video blogs in English, French and German at www.ecoplushome.com.

Gleaning power from an electric heat pump that consumes geothermal energy, the home will also be supplied with electricity from photovoltaic panels on the roof, while a solar thermal system will heat domestic water and provide radiant warmth inside the home.

"To bring those components together is a pretty new," Lerche said, adding that his goal is to prove green homes can be affordable and that the technology works.

While the house will be hooked up to NB Power's grid, the idea is to only buy as much power as is sold to the system each year.

Once the year is up and the project is assessed, Lerche and partner firms want to start supplying the national housing market with their net-zero energy homes.

"The major goal is not only to have a demonstration project in Bathurst, but the next step is an Eco Plus Homes kit," he said.

The firms will spend the year tallying up costs before offering a package with a price tag to home buyers.

Last week Lerche, local project manager Keith Kenny from the Kenny Group and Bathurst MLA Brian Kenny participated in a groundbreaking ceremony where the house will sit.

Fredericton's Maple Leaf Homes is currently building the house. Once in place, components will be supplied by Germany's Bosch Thermotechnik GmbH.

"It's in production right now as we speak," said Maple Leaf Homes president Jacques Roy.

Roy said the home will be modelled through Efficiency New Brunswick standards, with extra insulation in the walls and attic and two-inch styrofoam on the exterior to make it as airtight as possible.

"What really is going to make a difference in the house is the components that Bosch is going to install in this house," he said.

The firms chose Bathurst because of its extreme weather conditions; the city's winter would be colder than average in Canada, Roy said, so the home's energy usage would be the ultimate test of the net-zero energy concept.

"If it works there, it should work anywhere."

According to Efficiency New Brunswick's senior energy adviser Joe Waugh, net-zero energy homes will eat up a larger market share once inevitable legislation aimed at limited carbon emissions comes into play.

"It's being staked out as the next big step," Waugh said.

He said the move for home builders will be toward pumping out homes ready to be made net-zero energy efficient with additional components.

Through Canada's EnerGuide system for grading energy-efficient homes, pre-fabricated houses with a rating of 80 out of 100 are considered green.

A rating of 90 would make a home ready for net-zero energy efficiency, while the last 10 points to get to the ultimate score of 100 would come from components such as photovoltaic and wind power systems, Waugh said.

New Brunswick's Kent Homes announced in April it would begin building energy efficient houses under its Evergreen Homes name; the homes would meet an EnerGuide standard of 80.

In addition to the Bathurst project, the Canada Mortgage and Housing Corporation has a net-zero energy Vision home planned for Moncton.

"These two houses that we're talking about, the Bathurst house Eco Plus Home and the Vision home, they'll be the first net metered, zero-energy houses in the province," Waugh said.

McGraw-Hill Construction's Green Outlook 2009 says the value of U.S. green construction starts was up five-fold from 2005 to 2008 (from US\$10 billion to \$36-\$49 billion), and could triple by 2013, reaching \$96-\$140 billion.

It remains unclear what market exists for energy efficient homes in Canada or how much the industry is projected to be worth in years to come.

According to the Canada Green Building Council, 46 per cent of the roughly 7,500 households the organization polled in July believed it is important to have their homes certified with a green label.

The survey also revealed that 82 per cent of Canadians interviewed said they would invest more in a home that was eco-friendly, with the majority saying they would pay one to five per cent more for such a home certification label.

"It's basically telling the market that there is an appetite from the Canadian consumer that their home is certified," said Ron Lemaire, spokesman for the organization.

Waugh believes that the national building code will change to force homebuilders to move toward green building, while federal legislation will make it cost effective for the average homeowner to live in a house that produces as much power as it consumes, annually.

"They pay for themselves," he said of the net-zero energy homes.